

### Remarks

Claims 1-5, 7-11, 13-19, 22-25, 27-34, 36-44, 47-50, 71, 73 and 75-79 are pending and presented for examination. Claims 59-70 are withdrawn from consideration.

No new matter is added by the present Amendment. Applicant specifically reserves the right to pursue the subject matter of the canceled or amended claims in a related application. Each of the rejections levied in the Office Action is addressed individually below.

#### Claim Rejections – 35 U.S.C. § 103

Claims 1-5, 7-11, 13-19, 22-25, 27-34, 36-44, 47-50, and 75-79 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sherwood et al., Biomaterials, 23:4739-4751, 2002 (“Sherwood”) in view of Griffith et al., Science, 295:1009-1014, 2002 (“Griffith”). The Examiner acknowledges that “Sherwood differs from the present invention for not teaching embryonic stem (ES) cells and a cell adhesion promoter and a growth factor to promote the differentiation of ES cells to form tissue-like structures.” The Examiner relies on Griffith to provide teachings or suggestions of using ES cells, growth factors and adhesion proteins.

Claims 71, 73 and 75-79 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sherwood in view of Griffith and further in view of U.S. Patent Publication 2002/0146678 (“Benvenisty”). The Examiner further cites Benvenisty for teachings of exposing ES cells to Activin A, a growth factor. The Examiner concludes that it would be *prima facie* obvious for an ordinarily skilled artisan to modify the teachings of Sherwood and Griffith as taught by Benvenisty, and to reach at the claimed invention.

Applicant respectfully traverses these rejections.

The present application, U.S.S.N. 10/731,672, filed December 9, 2003, claims priority to U.S. Provisional Patent Application Serial No. 60/432,228, filed on December 10, 2002 (the ‘228 application), and U.S. Provisional Patent Application Serial No. 60/443,926, filed on January 31, 2003 (the ‘926 application). Applicant submits that Griffith was published on February 8, 2002, less than one year prior to the filings of the provisional applications, to which the present application claims priority.

Applicant therefore submits herewith a Declaration under 37 C.F.R. § 1.131, signed by inventor Shulamit Levenberg, Ph.D., for the purpose of removing Griffith from consideration by the Examiner. The Declaration and supporting exhibit set out that the conception and reduction

to practice of the claimed invention had been made prior to the effective date (February 8, 2002) of the cited Griffith. Exhibit A includes a description of experiments in which growth factors were added to differentiate stem cells on polymer scaffolds as recited in the present claims. The experiments were performed and recorded on Dr. Levenberg's laboratory notebook on days before February 8, 2002; however the dates have been redacted.

To the extent that the obviousness rejections based on the combination of Sherwood with Griffith, even further in view of Benvenisty, may be applicable to the presently pending claims, Applicant respectfully submits that they should be obviated upon submission of the Declaration under 37 C.F.R. § 1.131.

### Conclusion

Applicant would like to thank Examiner for his/her time and consideration of this case. If a further telephone conversation would help clarify any issues, or help expedite allowance of this case, Applicant invites the Examiner to contact the undersigned at (617) 248-5175.

It is believed that all fees due with this response are being submitted herewith. To the extent that there are any discrepancies between what Applicant has paid with this submission and what the USPTO believes is owed, please apply any charges or credits to deposit account 03-1721, referencing Attorney Docket No. 0492611-0530 (MIT 10077). Applicant respectfully requests that a Notice be issued explaining any such discrepancy.

Respectfully submitted,

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